



Appendix D

ECONOMIC BENEFIT STUDY

ECONOMIC BENEFIT STUDY

Avra Valley Airport

EXECUTIVE SUMMARY

This report presents the results of a study of the economic benefits of Avra Valley Airport on the airport service area for the year 1998.

The Avra Valley Airport is located in the Town of Marana in the northeastern part of Pima County, Arizona. The airport service area includes the northern portion of the Greater Tucson metropolitan region. Historically a popular tourist destination, the area consistently records strong population growth in population and employment. The airport provides general aviation services for both business and recreational travelers, and in addition is a location of a number of aviation related events during each year.

The methodology of the economic benefit analysis follows procedures similar to those recommended by the Federal Aviation Administration, the Aircraft Owners and Pilots Association, and the American Association of Airport Executives.

Interviews and surveys of suppliers and users of aviation services were conducted to measure economic activity created and supported within the service area by the airport. Sources of information included based aircraft owners, on-airport employers, government agencies, event organizers, and business and recreational visitors who used the airport.

AIRPORT BENEFITS

Airports benefit the regional economy through the revenues, earnings and jobs

associated with aviation activity both on and off the airport. Airports create employment, produce income, and influence regional spending levels. On-airport economic activity includes outlays by both suppliers and users of aviation services. Off-airport activity is primarily linked to visitors and air travelers.

There are three *measures* of economic benefits used in this study:

- **Gross Revenues**
- **Earnings**
- **Employment**

Gross revenues measure the stream of dollars from airport-related economic activity and include sales of business firms, visitor outlays, and government spending.

Employment is a measure of the number of jobs supported by the gross revenues within the service area, both on and off the airport.

Earnings represent the payments received by workers who create the goods and services that are sold to produce gross revenues.

There are four *types* of economic benefits associated with activity at Avra Valley Airport.

Direct Benefits result from the supply of aviation goods and services on the airport. Producers of Direct Benefits at Avra Valley Airport include private businesses and the airport administration.

Indirect Benefits are due to off-site activity caused by the presence of the aviation facility. Indirect Benefits in the Avra Valley Airport service area result when air traveler spending creates revenues, jobs, and earnings in the tourism sector.

Induced Benefits are the multiplier effects of the Direct and Indirect Benefits that occur as the initial dollars injected into the economy are respent within the service area. Multiplier effects come into play when, for example, an aircraft mechanic's wages are spent to purchase food, housing, clothing, and medical services in the local community. These second round dollars induce more jobs and earnings in the economy of the region, creating a multiplier or secondary impact.

Total Benefits are the sum of the Direct, Indirect and Induced Benefits. In this study, the combined Direct and Indirect Benefits will be referred to as Primary Benefits, but these may also be thought of as initial impacts. The Total Benefits encompass both the initial and secondary economic impacts of the airport on the service area on revenues, earnings, and employment.

The Total Benefits of Avra Valley Airport in 1998 are illustrated in the box below.

The airport was the source of total gross revenues of \$14.2 million. This is the measure of all spending flows associated with the presence of the airport and incorporates all multiplier effects of Induced Benefits. This spending and output supported 234 jobs within the service area of the airport, with total earnings to workers of \$4.9 million.

SUMMARY OF BENEFITS

Direct, Indirect, and Induced Benefits created by Avra Valley Airport are shown in Table 1. Measured by revenues, forty-five percent of benefits are Direct (\$6.4 million); fourteen percent are Indirect (\$2.0 million); and forty-one percent of benefits (\$5.8 million) are induced from multiplier effects.

Avra Valley Airport Total Economic Benefits

- **234 Total Jobs Supported**
- **\$4.9 Million Total Earnings**
- **\$14.2 Million Gross Revenues**

TABLE 1
Total Economic Benefits: 1998
Avra Valley Airport

	BENEFIT MEASURES		
	Gross Revenues	Earnings	Employees
Direct Benefits: On-Airport Activity Aviation Businesses FBO Services Sky Diving Aircraft Restoration Food Services Administration Capital Projects	\$6,362,538	\$1,714,477	88
Indirect Benefits: Air Visitors (GA Travel, Aviation Events) Lodging Food/Drink Retail Goods/Services Entertainment Ground Transport	1,974,060	466,501	39
Primary Benefits: Summation of Direct Benefits & Indirect Benefits	8,336,598	2,180,978	127
Induced Benefits (Multiplier Effects)	5,838,662	2,704,737	107
TOTAL BENEFITS	\$14,1725,260	\$4,885,715	234

Direct Benefits:
On-Airport Activity

There were ten on-site businesses located on Avra Valley Airport in 1998. Combined with airport capital projects, these economic units created Direct Benefits of:

- **\$6.4 Million Gross Revenues**
- **\$1.7 Million Earnings**
- **88 On-Airport jobs**

Businesses on the airport include FBO services, aircraft restoration, food services, and skydiving. On airport employers purchased supplies and materials from the local community during the year valued at \$3.5 million.

Indirect Benefits:
Air Visitors and Events

Visitors traveling for business or personal reasons, arriving in the region by general aviation aircraft, spent for lodging, food and drink, entertainment (such as golf and local attractions), retail goods and services, and ground transportation including auto rental and taxis. During 1998 there were 4,560 transient (visiting) general aviation aircraft and more than 9,000 air travelers that arrived at Avra Valley Airport. In addition there were on-airport events such as air shows and skydiving that created revenues for the hospitality sector.

General aviation travelers and other visitors created Indirect Benefits of:

- **\$2.0 Million Gross Revenues**
- **\$466,501 Earnings**
- **39 Jobs in the Hospitality Sector**

Combined Direct and Indirect Benefits summed to Primary Benefits of:

- **\$8.3 Million Gross Revenues**
- **\$2.2 Million Earnings**
- **127 Jobs**

These measures represent the "first round" revenues, earnings, and jobs in the Avra Valley Airport service area due to the presence of the airport. This economic activity would not have taken place without the airport, the aviation services provided there, and spending by users of these services.

Induced Benefits:
Multiplier Effects

After the initial aviation dollars were spent in the airport service area by suppliers or users of aviation services, they continued to circulate in the region, creating additional or "induced" output, jobs and earnings. Multipliers for six aviation related sectors (transportation, lodging, retail, eating places, entertainment, and construction) for Pima County based on data from the U. S. Department of Commerce were applied to estimate Induced Benefits.

The initial revenue stream of \$8.3 million created by the presence of Avra Valley Airport stimulated induced revenues in the airport service area of \$5.8 million, creating an additional 107 jobs with earnings of \$2.7 million.

Total Benefits

The sum of Direct, Indirect and Induced Benefits is the Total Benefits of \$14.2 million gross revenues, \$4.9 million in earnings, and 234 jobs supported in the Avra Valley Airport service area.

ECONOMIC BENEFITS

This section provides more detail on the components of the benefits of Avra Valley Airport, including the Direct Benefits of on-airport operations, the Indirect Benefits from visitor and event spending, and the Induced Benefits due to multiplier effects.

DIRECT BENEFITS: AIRPORT OPERATIONS

Table 2 illustrates the Direct Benefits from the annual operation of Avra Valley Airport. Data on revenues, employment and earnings were obtained from mail surveys and interviews conducted with airport tenants.

Revenues

On-airport private aviation operations created gross revenues of \$5.7 million in 1998. There were 10 private employers on the airport during the 1998 study period providing aviation related services.

Full service FBO activities include flight training, aircraft sales and rental, aircraft charter, and fueling and line services for based aircraft and transient travelers. Aircraft maintenance and restoration services are available for general aviation and speciality aircraft including larger aircraft of historical significance. Privately owned storage space in hangars and tie-downs is available for lease.

The skydiving center at Avra Valley Airport provides instruction, supplies, equipment, and related services such as parachute repacking. The facility draws beginners and advanced participants at the world class level for recreational jumping, training, and competitive activity.

Capital Projects

Capital projects are vital for airports to maintain safety and provide for growth. Capital spending for airport improvements also creates jobs and injects dollars into the local economy. During the past five years, \$3.2 million was invested in capital improvements at Avra Valley Airport. An annual average of \$641,998 was used to measure the influence of capital spending on economic benefits for 1998.

Employment and Earnings

Surveys and interviews with aviation employers provided a tally of 77 private aviation-related jobs on the airport. However, it must be noted that some employers converted part time jobs to full time equivalents, while others did not. And, some surveys were incomplete due to concerns about disclosure. Therefore, it is likely that actual "head-count" of employment on the airport may be greater than described in this study.

The 77 private aviation workers on the airport brought home annual earnings of \$1.5 million. This figures does not include construction workers employed on various capital improvement projects.

With the addition of an annual average of 11 construction workers, the private employment on the airport was 88 workers in 1998 and earnings of \$1.7 million.

Summary of Direct Benefits

The sum of aviation and construction activity at Avra Valley Airport created Direct Benefits of \$6.4 million in revenue flows associated with the presence of the airport. These revenues supported employment of 88 workers on the airport, with earnings of \$1.7 million.

TABLE 2
Direct Benefits from Airport Operations:
Revenues, Earnings and Employees
Avra Valley Airport

	BENEFIT MEASURES		
	Gross Revenues	Earnings	Employees
Airport Businesses FBO Services Aircraft Sales & Rental Aircraft Maintenance Aircraft Restoration Aircraft Testing Skydiving Center Food Services	\$ 5,720,540	\$1,451,258	77
Capital Projects	641,998	263,219	11
DIRECT BENEFITS	\$6,362,538	\$1,714,477	88
Source: Survey of airport employers, 1998.			

INDIRECT BENEFITS:
AIR TRAVELERS

Avra Valley Airport attracts visitors from throughout the Western region and the nation who come to the area for both business and personal travel. This section provides detail on economic benefits from general aviation flyers who use the airport as well as those who visit the area to participate in or witness the various events at the airport such as air shows and sky diving competitions. Some of those persons who

visit for aviation events may travel by auto or commercial air carrier, using facilities at Phoenix Sky Harbor Airport or Tucson International Airport.

General Aviation Visitors

Total transient GA arrivals were estimated as 9,600 aircraft for 1998. Some visitors stop only briefly at the airport, some stay for most of a day, and some stay overnight. Overnight visitors represented 20 percent and day visitors made up

80 percent of the total transient GA aircraft arriving at Avra Valley Airport.

A questionnaire was administered to general aviation travelers to gather information on purpose of travel, length of stay, destination, and expenditures by category of spending for visitors. Separate analyses were conducted for those travelers who reported an overnight stay and those whose visit was one day or less in duration.

Overnight GA Visitors

The travel patterns underlying the calculation of overnight GA visitor economic benefits are shown in Table 3. There were 1,140 overnight aircraft at Avra Valley Airport during 1998. The average travel party was 2.3 persons, which yields 2,622 visitors arriving by general aviation aircraft. The average stay in the Greater Tucson area was 2.7 nights. Multiplying 2.7 by 2,622 visitors gives a total of 7,079 visitor days for those travelers who stayed overnight in the area.

TABLE 3 General Aviation Overnight Visitors Avra Valley Airport	
Item	Annual Value
Overnight Transient AC	1,140
Avg. Party Size	2.3
Number of GA Visitors	2,622
Average Stay (nights)	2.7
Spending per Aircraft	\$595
Total Expenditures	\$678,300
Source: Visitor survey, 1998	

The leading reason for travel stated on the survey forms completed by aircraft owners was "personal or family visit" (41%). Next in importance was "business" (29%), followed by "tourism" (24%) and "fuel stop" (6%).

Most travel parties reported that they visited multiple destinations while in the metropolitan area. When asked to identify their primary destination, the City of Tucson was listed as the destination by 28 percent of travelers; other Tucson metro area locations were cited by 68 percent; and all other locations accounted for the remaining 4 percent.

Each arriving overnight aircraft at Avra Valley Airport had an economic value of \$595 in spending. Multiplying \$595 per aircraft by 1,140 aircraft yields total overnight visitor revenues of \$678,300.

Detail on spending per overnight aircraft is shown in Table 4. The largest single spending category is retail, which accounted for 27 cents of each visitor dollar and averaged \$161 per aircraft per trip. Total retail outlays for the study period by overnight GA visitors exceeded \$180,000.

TABLE 4 Spending Per Overnight Aircraft Avra Valley Airport		
Category	Spending	Percent
Lodging	\$123	21
Food/Drink	151	25
Retail	161	27
Entertainment	99	17
Transportation	61	10
TOTAL	\$595	100
Note: Expenditures per aircraft are for all survey respondents, including those who had no outlays for some of the categories shown.		
Source: Visitor survey 1998		

Lodging expenditures were only made by fewer than one half of general aviation travelers. Those visitors traveling for personal reasons (41 percent) were often visiting friends and relatives. Many of these travelers reported no expenditures for lodging and, occasionally, food. It should be noted that this is somewhat of an understatement of the actual impact of their visit, since the laundry costs, water use, and grocery bill of their host was very likely increased during the time of the visit.

Lodging accounted for 21 percent of GA visitor spending. The average lodging outlay for those respondents who actually stayed at a hotel or motel was \$246 during their trip to the Avra Valley Airport service area. A significant proportion of general aviation travelers (21 percent) reported that they owned property in the area and stayed there during their visit.

Spending for food and drink accounted for 25 percent of the visitors' costs while in the Avra Valley Airport area. The average outlay for food and drink per aircraft was \$151, or \$24 per person per day during the trip.

The retail and entertainment categories tended to have wider variations in reported spending by survey respondents. Business travelers often reported no outlays in either category, while several tourist travel parties reported spending more than \$1,000 on retail during their stay.

The average outlay per aircraft for retail spending was \$26 per person per day. The average spending on entertainment was lower, at \$99 per aircraft and \$16 per person per day. Ground transportation (auto rental and taxi) accounted for 10 cents of each dollar spent by overnight visitors. Average ground transport spending per aircraft was \$61.

Day Visitors

According to FBO personnel, eight out of ten transient general aviation visitors to Avra Valley

Airport stayed in the service area for one day or less. In 1998, it is estimated that there were 3,420 aircraft that stopped at the airport for one day while the travel party conducted business or pursued a personal activity (Table 5).

The most frequently mentioned purpose for the one day visit was purchase of fuel (42 percent). The next most frequent purpose was personal travel (26 percent), followed by tourism (17 percent) and business (15 percent).

TABLE 5
General Aviation Day Visitors
Avra Valley Airport

Item	Annual Value
One Day Transient AC	3,420
Avg. Party Size	2.0
Number of GA Visitors	6,840
Average Stay (Days)	1
Spending per Aircraft	\$45
Total Expenditures	\$153,900
Source: Visitor survey, 1998	

With an average travel party size of 2.0 persons, the number of visitor days created by one day aircraft was 6,840. These visitors spent an amount reported as \$22.50 per person per day, or an outlay for 2.0 persons per aircraft of \$45.

The largest category of spending by one day visiting travel parties was food and drink, which accounted for more than one half of the total outlays (Table 6). Retail spending for one day visitors was the second largest category, with outlays of \$13 per aircraft.

TABLE 6
Spending Per Day Visitor Aircraft
Avra Valley Airport

Category	Spending	Percent
Lodging	0	
Food/Drink	24	53
Retail	13	29
Entertainment	5	11
Transportation	3	7
TOTAL	\$45	100
Note: Expenditures per aircraft are for all survey respondents, including those who had no outlays for some of the categories shown.		
Source: Visitor survey 1998		

With an average of 9.3 general aviation day visitor aircraft arriving each day of the year, the average daily impact from these travelers exceeds \$420. General aviation day visitors spent \$153,900 in the Avra Valley Airport service area during 1998.

Comparing day visitor spending to overnight visitor spending, the overnight visitor total is four times that of the one day visitors, although there are three times as many one day aircraft.

Combined Ga Visitor Benefits

Table 7 shows the economic benefits resulting from spending in the region by combined overnight and day general aviation visitors arriving at Avra Valley Airport.

There were 1,140 arriving overnight general aviation aircraft and 3,420 one day aircraft in 1998. Each overnight travel party spent a reported average of \$595 during their trip to the Avra Valley Airport service area and travelers on

each day visitor aircraft spent an estimated \$45 per trip.

Multiplying the expenditures for each category of spending by the number of aircraft yields the total outlays for lodging, food and drink, transportation, entertainment, and retail spending due to GA visitors during the year.

Gross revenues from air visitor spending on goods and services during 1998 summed to \$832,200. This figure is important in computing economic benefits since total spending supports jobs in the local economy. Moreover, sales and other taxes generated by visitors are based on total revenues.

There were a total of 13,919 visitor days attributable to the presence of Avra Valley Airport during the year. On an average day, there were 54 visitors in the survey area that had arrived via GA aircraft at the airport.

Average daily spending by GA air travelers was \$2,280. The largest spending category was food and drink, accounting for more than one quarter million dollars of revenues to service area eating and drinking establishments during the year.

While expenditures for food and drink made up thirty percent of the total GA visitor outlays during the 1998 study period, retail spending was almost as great, accounting for 27 percent of visitor spending and amounting to more than \$225,000.

Skydiving and Air Show Visitors

There were two other sources of visitors to Avra Valley Airport in 1998 that created revenues, earnings and employment for workers in the airport service area: skydiving training/competition and annual air show events which brought to the area participants and spectators who made expenditures for food, lodging, entertainment, retail, and ground transportation.

TABLE 7
Indirect Benefits
Expenditures By General Aviation Visitors: 1998
Avra Valley Airport

Category	Number of Aircraft		Expenditures per Trip		Gross Revenues
	Overnight	Day	Overnight	Day	
Lodging	1,140		\$123		\$140,220
Food/Drink	1,140	3,420	151	\$24	254,220
Retail Sales	1,140	3,420	161	13	228,000
Entertainment	1,140	3,420	99	5	129,960
Ground Transport	1,140	3,420	61	3	79,800
TOTAL			\$595	\$45	\$832,200

Source: Derived from Visitor Survey 1998

Skydiving Events

Good weather and a community supportive of aviation have encouraged the development of Arizona as a location for many aviation events. The skydiving center at Avra Valley Airport annually hosts a number of competitions and exhibitions, as well as training sessions. In a typical year, skydiving enthusiasts can come to Avra Valley Airport for the Arizona Classic or the US Nationals. Visiting groups include collegiate jumpers, military teams, international jumpers, as well as numerous individuals and other organizations.

While most individual jumpers would come to the area for a day and not stay overnight, many of the visiting teams must book stays of up to two weeks.

After review of figures on number of participants for each type of jumping activity, total revenues

from visitors to the area drawn by skydiving training, events, and other activities were estimated as \$1,098,360 for 1998.

Air Shows

The economic benefits from air show events at Avra Valley Airport result when participants and spectators make expenditures for food, lodging, and other expenses associated with their visit to the Avra Valley Airport areas.

The estimated expenditures by those who came to the area for air shows summed to \$43,500 for 1998.

Indirect Benefits: Visitor Spending

Table 8 presents the Indirect Benefits of GA visitor spending plus expenditures by those who

came to the area as spectators or participants in events on the airport.

Gross revenues due to GA and event spending summed to \$1,974,060 in 1998. Of the gross revenues created by visitors, an average of 24 cents of each dollar stayed in the local economy as earnings to employees (\$466,501) whose jobs were supported by this spending.

Based on average salaries as shown in Table 8 for each category of spending, an estimated 39 jobs

in the Avra Valley Airport service area were related to GA visitor spending

The highest earnings in the hospitality industry were in the lodging sector, at \$163,162. Although ground transportation had the highest salaries, the relatively lower gross revenues due to visitor expenditures influenced the number of jobs created. Visitor spending supported 2 jobs in ground transportation, 7 in entertainment, and 3 in retailing. The largest number of jobs (15) were in eating and drinking establishments.

TABLE 8
Indirect Benefits
Revenues, Earnings and Employment From GA And Aviation Event Visitors: 1998
Avra Valley Airport

	Gross Revenues	Earnings	Average Salary	Employment
Lodging	\$582,720	\$ 163,162	\$ 13,600	12
Food/Drink	529,940	131,235	8,624	15
Retail Sales	363,360	43,240	14,188	3
Entertainment	310,440	80,714	11,909	7
Ground Transport	192,600	48,150	20,000	2
TOTAL	\$1,974,060	\$ 466,501		39

Note: Some columns may not compute exactly due to rounding. Earnings column derived from "percent to labor" data reported in *Census of Retail Trade* and *Census of Service Industries*, U. S. Department of Commerce. Percentages are lodging 28%; food service 25%; retail 12%; entertainment 26%; ground transport 25%. Salaries are from *County Business Patterns*, U. S. Census Bureau, 1995, converted to 1998 wage rates for Pima County. Employment is not necessarily full time equivalents; includes full and some part time workers, figures rounded to head counts

BASED AIRCRAFT BENEFITS

A survey of owners of aircraft based at Avra Valley Airport was conducted to compile information on number and value of aircraft, annual expenditures and usage patterns, purpose of travel, average party size, and average distance flown per trip. Questions were also posed concerning the importance of the airport for business flyers.

TABLE 9
Based Aircraft Profile
Avra Valley Airport

Item	Value
Number of Aircraft	206
Total Market Value	\$12,276,364
Average Value	\$59,594
Total Annual Outlays	\$1,374,432
Average Annual Outlays	\$6,672
Source: Based aircraft owner survey, 1997	

The average market value for the 206 aircraft based at Avra Valley Airport was \$59,594. The total value of all aircraft based at the airport was \$12.3 million (Table 9).

The combined distance logged on Avra Valley Airport based general aviation aircraft for personal and business travel summed to 3.4 million miles in 1998. The passenger miles, after accounting for party size, totaled 6.7 million.

An approximation of the dollar value of travel on based aircraft may be made by comparison with financial reports of scheduled air carriers, who report typical revenues per passenger mile in the

range of 10 cents. Applying this value to passenger miles traveled on aircraft based at Avra Valley Airport, the "airline equivalent" value of travel is \$667,000.

This figure is an estimate, which does not include a measure of the economics gains such as those from business trips, which may have been substantial. Personal trips, such as those for medical reasons, often have high economic value as well. Further, the time saved by general aviation travel compared to automobile use or flying scheduled airlines is not calculated here, but certainly has economic significance.

It is important for citizens and policy makers to be aware that airports create significant *unmeasured* social and economic benefits for the regions which they serve. For example, convenient air transportation allows freedom for individuals to travel to satisfy their preferences for goods, services, and personal needs. Airports make the regional economy more competitive by providing businesses ready access to markets, materials and international commerce.

Airports also bring essential services to a community, including enhanced medical care (such as air ambulance service), support for law enforcement and fire control, and courier delivery of mail and freight. These services raise the quality of life for residents and maintain a competitive environment for economic development.

In addition to exerting a positive influence on economic development in general, aviation often reduces costs and increases efficiency in individual firms. Companies that operate general aviation aircraft typically record net income as a percent of sales approximately 50 percent greater than companies not utilizing such aircraft.

The presence of the airport as a factor affecting the personal quality of life and business success of aircraft owners was measured by survey

questions asking respondents to rate the airport as "very important, important, slightly important, or not important" to their residential location decision and their business.

The survey results show that Avra Valley airport is a significant factor in determining where aircraft owners live. Survey respondents derived benefits from having the airport nearby their residences and their places of employment.

Almost three out of four aircraft owners (72 percent) said that Avra Valley airport is "important" or "very important" to their residential location. A smaller proportion, 32 percent, stated that the airport is important or very important to their business or place of employment.

Those who reported the airport as important to their business were also asked for information about their business, in order to provide some measure of the overall benefit of the airport to the business flyer. Firms represented by users of Avra Valley based aircraft for business purposes accounted for 705 employees in the service area, and the businesses of the combined respondents accounted for more than \$59 million of annual sales.

A significant portion of the revenue created on the airport can be attributed to outlays by the owners of the 206 general aviation based aircraft for storage, maintenance, and operation of their aircraft throughout the year.

Owners reported expenditures averaging \$6,672 per year on repairs, maintenance and operations. Using these values, the total spending created in the region due to outlays by aircraft owners can be estimated as \$1.4 million in 1998. (Note that annual expenses for individual aircraft can vary greatly, depending on the size, technical specifications, and hours flown.)

TABLE 10
Based Aircraft - Use Patterns
Avra Valley Airport

Type	Annual Trips
Avg. Number of Trips	38
Avg. Business Trips	5
Avg. Personal Trips	33
Percent Business Trips	13%
Percent Personal Trips	87%
Source: Based aircraft owner survey, 1998	

Avra Valley based general aviation aircraft owners reported an average of 38 non-training trips per year, which is an average of 3 trips per month.

Eighty-seven percent of general aviation trips (33 trips per year) were for personal travel and thirteen percent of trips (5 per year) were for business purposes (Table 10).

TABLE 11
Based Aircraft - Personal Use
Avra Valley Airport

Item	Annual Value
Avg. Personal Trips	33
Total Personal Trips	6,754
Avg. Party Size	2.1
Avg. Round Trip Miles	362
Total Personal Miles	2,444,896
Total Passenger Miles	5,075,605
Source: Based aircraft owner survey, 1998	

The typical round trip for pleasure, recreation or other personal reasons was 362 miles, with 2.1 persons in the travel party (Table 11). There were an estimated 6,754 trips for personal reasons during the year.

Aircraft at Avra Valley Airport flew 2.4 million miles for personal reasons in 1998. With an average travel party of 2.1 persons, total non-business passenger miles flown during the year summed to 5.1 million.

The typical business use for a general aviation aircraft was 958 miles round trip with 1.7 persons in the travel party (Table 12). There were an estimated 964 business trips made from Avra Valley Airport during the year.

TABLE 12 Based Aircraft - Business Use Avra Valley Airport	
Item	Annual Value
Avg. Business Trips	5
Total Business Trips	964
Avg. Party Size	1.7
Avg. Round Trip Miles	958
Total Business Miles	923,482
Total Passenger Miles	1,595,105
Source: Based aircraft owner survey, 1998	

Avra Valley based aircraft flew 923,482 business miles in 1998. With an average travel party of 1.7 persons, passenger miles flown on business trips originating at Avra Valley Airport summed to 1,595,105.

TAX BENEFITS

Because of the flow of spending created by the presence of Avra Valley Airport, the facility is an important source of public revenues. (Tax revenues are in addition to various fees paid by aircraft owners and other users of the airport.)

In 1998, an estimated \$1.4 million of tax revenues were collected as a result of total economic activity related to the airport. On-airport activity alone created \$494,865 of tax revenues (not including construction activity).

Estimates in Table 13 were based on ratios provided by the Joint Legislative Budget Committee. Property taxes are based on 60 percent employee home ownership and an average value of \$110,000. Property tax rates for Arizona were provided by the Arizona Tax Research Foundation and represent an Arizona average that may not apply specifically to any locality.

The Arizona income taxes shown are taxes on payroll income, and do not include corporate income tax.

Sales taxes are based on the assumption that two thirds of earned income is spent on taxable commodities.

In addition to the taxes shown, separate estimates were made for sales taxes paid by visitors. In 1998, general aviation travelers and event participants and spectators made outlays in the service area of \$1,974,060. Sales taxes on this amount were \$138,184 and bed taxes on lodging outlays were \$23,309.

TABLE 13
Tax Benefits From Aviation: 1998
Avra Valley Airport

	On Airport Benefits	Total Benefits
Employees	77	234
Payroll Earned	\$1,451,258	\$4,885,715
Total Revenues	5,720,540	14,175,260
Arizona Income Taxes	31,928	107,486
Sales Taxes	70,137	235,907
Fuel Taxes	9,240	28,028
Property Taxes	68,930	209,087
Business Taxes	314,630	779,639
TOTAL TAXES	\$494,865	\$1,360,146

SUMMARY AND FUTURE IMPACTS

Airports are available to serve the flying public every day of the year. On a typical day at Avra Valley Airport, there are more than 200 operations by aircraft in use for business, recreation, and training flights.

During each day of the year in 1998, Avra Valley Airport generated over \$38,000 gross revenues within its service area (see box). Revenues and production support jobs, not only for the suppliers and users of aviation services, but throughout the economy. Each day Avra Valley Airport provides 77 aviation related jobs directly on the airport and in total supports 234 local jobs in the airport service area. These workers brought home daily earnings of \$13,386 for spending in the community in 1998.

Table 14 shows a summary of economic benefits associated with Avra Valley Airport in 1998. The airport has an economic benefit of \$14.2 million in gross revenues, allowing for all multiplier effects. As aviation activity increases at the airport, the economic benefits may be expected to increase.

Estimated future benefits of the airport in the short term (approximately to year 2005) are based on growth of operations from the current level of 71,300 to 97,000 per year. Assuming commerce on the airport and in the community increases at the same pace, employment on the airport will increase to 105 workers.

Jobs related to air visitors will increase to 54 (Table 15). Visitor spending will rise to \$2.7 million (measured in 1998 dollars). The gross revenues due to the presence of the airport will increase to \$17.8 million, including all multiplier effects.

The benefits for the Intermediate Term are based on 115,000 (Table 16). On-airport employment will rise to 124 workers and the service area employment impact with multiplier effects is 345 total jobs. Visitor spending exceeds \$3 million and gross revenues will rise to \$21.1 million with multiplier effects included.

The projected benefits for the Long Term planning horizon are based on 150,000 operations and visitor spending of \$4.1 million (Table 17). At this scope of activity, the airport has a potential economic benefit of \$27.5 million in gross revenues. Accounting for all multiplier effects, jobs supported in the Avra Valley Airport service area under the Long Term assumptions total 450.

Avra Valley Airport Daily Economic Benefits

- **\$38,836 Gross Revenues**
- **234 Local Jobs Supported**
- **\$13,386 Payroll Earned**
- **\$3,726 Tax Revenue**
- **\$5,408 Visitor Spending**

TABLE 14
Summary of Economic Benefits: 1998
Avra Valley Airport

	Gross Revenues	Earnings	Employment
Airport Operations	\$5,720,540	\$1,451,258	77
Capital Projects	641,998	263,219	11
Air Visitors	1,974,060	466,501	39
<i>Subtotal</i>	<i>\$8,336,598</i>	<i>\$2,180,978</i>	<i>127</i>
Induced Benefits	5,838,662	2,704,737	107
Total Benefits	\$14,175,260	\$4,885,715	234

Note: Revenues, earnings and employment for 1998 reflect activity and spending associated with 71,300 operations.

TABLE 15
Projections of Future Economic Benefits (\$1998): Short Term
Avra Valley Airport

	Gross Revenues	Earnings	Employment
Airport Operations	\$7,779,934	\$1,973,711	105
Air Visitors	2,684,722	634,441	54
<i>Subtotal</i>	<i>10,464,656</i>	<i>2,608,152</i>	<i>159</i>
Induced Benefits	7,329,080	3,234,496	133
Total Benefits	\$17,793,736	\$5,842,648	292

Note: Revenues, earnings and employment for Short Term are based on activity and spending associated with 97,000 operations..

TABLE 16
Projections of Future Economic Benefits (\$1998): Intermediate Term
Avra Valley Airport

	Gross Revenues	Earnings	Employment
Airport Operations	\$9,223,890	\$2,340,032	124
Air Visitors	3,183,006	752,193	64
<i>Subtotal</i>	<i>12,406,896</i>	<i>3,092,225</i>	<i>188</i>
Induced Benefits	8,689,357	3,834,818	157
Total Benefits	\$21,096,253	\$6,927,044	345

Note: Revenues, earnings and employment for Intermediate Term are based on activity and spending associated with 115,000 operations.

TABLE 17
Projections of Future Economic Benefits (\$1998): Long Term
Avra Valley Airport

	Gross Revenues	Earnings	Employment
Airport Operations	12,030,720	\$3,052,103	162
Air Visitors	4,151,595	981,086	83
<i>Subtotal</i>	<i>16,182,315</i>	<i>4,033,189</i>	<i>245</i>
Induced Benefits	11,333,528	5,001,754	205
Total Benefits	\$27,515,843	\$9,034,943	450

Note: Revenues, earnings and employment for Long Term are based on activity and spending associated with 150,000 operations.

APPENDIX A

AVRA VALLEY AIRPORT

ECONOMIC BENEFIT STUDY

*Verbatim Comments
from
Transient General Aviation Visitors*

Verbatim Comments

Very nice airport and stop for fuel and service. The airport people were most helpful and accommodating. In traveling from Portland, Oregon to Ft. Worth, Texas this airport was the nicest and best run, from a pilot's point of view, that I stopped at.

I will be moving to Tucson soon and intend to base my twin engine aircraft at Avra Valley. It is the most convenient airfield for my intended new location at Saddlebrook.

The food was good, service was friendly, helpful, and over all great!!

I'll be back again; soon!!

Thanks.

Some taxi way lighting up grades would help for those night ground maneuvers to parking areas, also some ramp lighting.

Thanks again.

On a scale of 1-10 I give Avra Valley Airport a 9.

No rental cars were available at the airport.

Perfect setup and friendly service. It was nice parking close and having a restaurant to walk to. I plan to refuel on my way to Oshkosh.

Nice easy to get to airport. Friendly services.

We rented a car from the F.B.O. there and were given a very warm welcome and excellent service.

Fine airport with good facilities and services.

Avra Valley airport has improved considerably over the 20 or 30 years that I have been familiar with it. Thirty years ago I was afraid to land there due to the poor runway conditions.

Great airport. I stop many times.

Thanks to good F.B.O. management it has become an outstanding airport and a much needed alternate to T.I.A.A. and Ryan. Indeed, Phoenix has 6 or so outlying airports to Sky Harbor whereas Tucson has only 2.

I think the present management at Avra is doing an outstanding job.

My aircraft is regularly based at Ryan.

More G.A. hangers!!

Great restaurant! Nice folks.

Avra Valley Airport has favorable aircraft fuel prices and a nice restaurant.

I always stop when passing thru (I am based in So. California). Passed thru 6 times last year.

Needs Unicom for traffic advisories.

Great airport! Keep it just the way it is. Don't put in a tower!

Avra Valley Airport excellent! in any/all categories, service, runways, restaurant, etc.

Except! same comm. frequency (123.00 MHz) as Coolidge, Chandler and perhaps 1 or 2 other airfields. At times, Chandler and Coolidge can override Avra Valley traffic communications. How about a modification?!?

This was perhaps the best fuel stop we made on our entire trip from Tennessee to California.

We were looking for an efficient break from training and you provided that break.

The fuel was very reasonable, and we had lunch which was quick and reasonable.

The facilities were pleasant - clean - efficient.

We will be making the trip again this way, and will probably stop again weather permitting.

Thanks, for making our trip more enjoyable.

I and many of my friends would like to see Avra Valley welcoming ultra-light aircraft as tenants and visitors. I have a general aviation airplane and an ultra-light with no place to keep it. I'm not alone, there are lots of us with ultra-lights who need an airport to accept us and our business.

Excellent field and support people.

Great airport. Mechanics knew what they were doing. Got us on our way quickly.

Excellent airport - fast, efficient service.

Has great future as general aviation airport. Needs more shade hangars and full hangars for general aviation airplanes based at field and for future growth.

If not already planned, land should be acquired around the field as buffer zone against encroaching home developments.

Needs an instrument flight approach. Simplest would be ADF approach off the current beacon.

Stopped because fuel is priced right and food at the restaurant is good!!

Both of my aircraft are stationed at Ryan Field outside of Tucson. I often travel to Avra Valley Airport just to visit with friend, eat lunch and get fuel.

I prefer to fuel at Avra Valley because they'll bring a truck to the plane. This is not available at Ryan. It also gives me an excuse to fly the planes.

APPENDIX B

AVRA VALLEY AIRPORT ECONOMIC BENEFIT STUDY

SURVEY FORMS

AVRA VALLEY AIRPORT BASED AIRCRAFT SURVEY

Dear Aircraft Owner:

An Economic Benefit Study for Avra Valley Airport will be included as part of the Master Plan now being prepared. Your cooperation is very much needed to compile meaningful economic data about the airport. This survey of aircraft owners will be handled with the strictest confidentiality by an independent consultant and only aggregate numbers will be used in publishing the data. If you have questions about the survey, please call Jesse Craft, Pima County Department of Transportation, at 740-6379. Please return the survey form in the postage paid return envelope within ten days.

1. How many aircraft do you have based at Avra Valley Airport? _____

2. Please estimate the market value of your aircraft. _____

3. Please estimate your annual outlays for fuel, maintenance, insurance, storage and other expenses associated with your aircraft. _____

4. Please estimate the annual number of (non- training) trips in your aircraft.

Business _____ Personal _____

5. Please estimate average ROUND TRIP MILEAGE for a typical (non-training) trip.

Business _____ Personal _____

6. What was the average number of persons on a typical trip?

Business _____ Personal _____

7. Considering the location of your personal residence, how important is the airport as a factor determining where you have decided to live?

Very Important ____ Important ____ Slightly Important ____ Not Important ____

8. Considering your business or employment, how important is the airport as a factor determining the location, operation and success of this business?

Very Important ____ Important ____ Slightly Important ____ Not Important ____

9. If the airport is important to your business or employment, please provide the information below:

Number of Employees at Your Business _____ Annual Sales _____

Please Use Other Side For Comments or Suggestions About Airport

Thank you for your cooperation!

PIMA COUNTY ARIZONA

AVRA VALLEY AIRPORT GA VISITOR SURVEY

Dear Aircraft Owner:

*Your aircraft appears on our listing of visitors to Avra Valley Airport during the past year. We are asking your assistance in completion of this **confidential** questionnaire to measure the economic benefits from spending by GA visitors. The information will help us improve services for General Aviation travelers. If you have questions about the survey, please call Jesse Craft, Pima County Department of Transportation, at (520) 740-6379. Please return the survey form in the enclosed envelope within ten days.*

1. What was the main **purpose** of your most recent visit to the Avra Valley area?

Fuel stop only _____ Business trip _____ Tourism/sightseeing _____ Personal/family visit _____

2. How many **people** were in your travel party? Circle: 1 2 3 4 or more (specify) _____

3. Where was your **primary destination** while in the area? Did not leave airport _____

City of Tucson _____ Greater Tucson Area _____ Other (specify) _____

4. Did you stay at a home or property you own in the area? Yes _____ No _____

5. How many **nights** was your aircraft parked at Avra Valley Airport?

Circle: None (day trip) 1 2 3 4 or more (specify) _____

6. Please estimate **spending by your ENTIRE TRAVEL PARTY** on your visit to this area. Do not include expenditures for aircraft fuel or FBO services. Please circle the closest figure.

Hotel/Lodging:

None \$50 75 100 125 150 200 300 400 500 600 700 800 or more (specify) _____

Restaurant Food and Drink:

None \$10 25 50 75 100 125 150 175 200 300 400 500 600 or more (specify) _____

Retail Spending for Goods and Services (include groceries but not entertainment)

None \$10 25 50 75 100 125 150 175 200 300 400 500 600 or more (specify) _____

Entertainment (Golf, Movies, etc.):

None \$10 25 50 75 100 125 150 175 200 300 400 500 600 or more (specify) _____

Ground Transportation Including Auto Rental:

None \$10 25 50 75 100 125 150 175 200 300 400 500 600 or more (specify) _____

Please Use Other Side For Comments or Suggestions About Avra Valley Airport

Thank you for your cooperation!